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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,314	07/30/2001	Kota Yoshikawa	010935	8261

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EXAMINER

GARRETT, DAWN L

ART UNIT PAPER NUMBER

1774

DATE MAILED: 09/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

09/916,314

### Applicant(s)

YOSHIKAWA, KOTA

### Examiner

Dawn Garrett

### Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 and 9-19 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 20 is/are allowed.
- 6) ☒ Claim(s) 7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office action is responsive to the appeal brief received June 16, 2004. Upon full consideration of applicant's arguments regarding the rejection of claim 2 over Tamano et al. (U.S. Patent No. 5,811,834) and the rejection of claim 20 over Tamano et al. (U.S. Patent No. 5,811,834) in view of Arai et al. (US Patent Publication No. 2001/0041268), the examiner has withdrawn these rejections. Although Tamano et al. generally states that the cathode may be formed of two layers, the reference fails to teach with any specificity what materials would comprise each of the two layers. Moreover, Tamano et al. does not teach specifically selecting a cathode layer comprised of an alkaline metal or alkaline earth metal to be directly adjacent the organic EL layer and an cathode layer comprised of Ru, Rh, Ir, Os, Re or an oxide of Ru, Rh, Ir, Os, or Re to be on the outer layer of the anode. Finality of the Office action mailed November 26, 2003 is hereby withdrawn.
2. Claims 2 and 20 are allowed. The closest prior art is considered to be Tamano et al. (U.S. Patent No. 5,811,834). As discussed above, Tamano et al. fails to teach clearly a cathode of two layers wherein the layer closest to the EL layer is comprised of alkaline metal and an alkaline earth metal and the outermost cathode layer is comprised of Ru, Rh, Ir, Os, Re or an oxide of Ru, Rh, Ir, Os, or Re. The examiner notes that method claims 4-6 have not been rejoined with claims 2 and 20 at this time, because the method claims are not fully commensurate in scope with the allowable product claims.
3. As the next EL device species under consideration, the examiner has selected species "B", claims 7 and 8 (see the Office action mailed December 10, 2002, page 3 for reference).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kita et al. (US 6,656,608). Kita et al. discloses organic EL devices, which comprise an anode, light emission layer (organic EL layer) and a cathode (see col. 53, lines 33-59). The device may further include a buffer layer placed between the anode and the light emission layer (see col. 53, lines 64-67). The anode buffer layer may be comprised of vanadium oxide (see col. 54, lines 7-9). The vanadium oxide buffer layer is deemed to read upon the instant buffer layer that has "at least one type of metal...consisting of...V". Furthermore, because the entire buffer layer taught by Kita et al. is oxidized, the Kita et al. buffer layer reads upon "a surface of which is oxidized". Kita et al. further teaches the cathode may comprise sodium, potassium, magnesium, or lithium per the instant claim 8 requirement of a cathode comprising "any one of an alkaline metal and alkaline earth metal". Although Kita et al. fails to exemplify a device comprising a vanadium oxide anode buffer layer along with a cathode comprised of an alkaline metal or alkaline earth metal, it would have been obvious to one of ordinary skill in the art at the time of the invention to have selected a vanadium oxide anode buffer layer and an alkaline metal or alkaline earth metal containing cathode for the device, because Kita et al. teaches both a vanadium oxide anode buffer layer and an alkaline metal or alkaline earth metal containing cathode may be included in the device.


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*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is 571-272-1523. The examiner can normally be reached Monday through Friday during normal business hours. Please allow the examiner twenty-four hours to return your call.

If reasonable attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached at 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DAWN GARRETT  
PRIMARY EXAMINER  
ART UNIT 1774

D.G.  
August 30, 2004

  
**B. HAMILTON HESS**  
**PRIMARY EXAMINER**